241 Large plantations of tea, coffee, rubber and
313 cinnamon have been developed, chiefly by British, in the highlands in the past hundred years, and in the forests teak provides a basic industry.

132 The rainfall is very heavy, especially in the north where the mountains encroach nearer to the sea. Through most of the area it varies between 75" and 170"; in the extreme south it drops to 32". Most of the rain comes with the southwest monsoon between May and September; lighter rains occur with the northeast monsoon in late November and December. Humidity is
[243] always very high. In most areas two wet paddy crops are taken in a year, in February and September. The temperature varies from 70° to 90°, and is hottest in April just before the monsoon breaks.

[4] (2) Political Divisions

631 From the establishment of British supremacy in 1792, until July 1949, the Malabar Coast was divided into three political areas. In the north is the Malabar District of Madras State, in area 5,790 square miles. It is governed in internal affairs by the legislative assembly of Madras, and is under a Collector (of land revenue) who lives in Calicut, the capital of the district. The port of Cochin is also administered as part of Malabar District. In the centre was Cochin State, in area 1,493 square miles. It was governed internally by the Maharaja of Cochin, assisted by the Cochin legislative assembly, whose headquarters was in Ernakulam, the capital. In the south was Travancore State with an area of 7,625 square miles, under the Maharaja

2:Gough E-4, 5 (1947-1949)1961 A Wil Kerala A Wil
Central Kerala Nayar

nese (from at least the sixth century) and after 1498 the Portuguese, followed by the English, Dutch, and French (Logan, 1951, I: 251–254, 258, 294–399).

The coast falls roughly into three natural divisions: the coastal strip, the midlands, and the highlands rising into the Ghats (cf. Buchanan, 1807: 565–566). The coastal strip is flat and sandy. Its chief product is coconuts, with some rice and bananas. In the southern half it is broken by salt-water lagoons which for over a hundred miles form a continuous navigable chain parallel to the sea. Most of the chief towns are situated on the coast, divided by chains of little fishing villages. Many of the coast towns are ancient, and most of them lie at the mouths of navigable rivers which flow westward from the Ghats. From time immemorial raw materials, chiefly pepper, were brought by boat from the inland hillsides for shipment from these ports.

The midlands comprise low hills and fertile valleys. Broad strips of alluvial rice lands lie in the valleys, thinning out as the land rises into the foothills of the Ghats. On the hill slopes are gardens of coconut palms, bananas, pepper, ginger, and many fruit trees such as jack and mango. It was probably wild pepper which was exported in Roman times, but pepper and other spices have been deliberately cultivated at least since 1290 (Ricci, 1931: 326). Cashew nuts, introduced by the Portuguese, formed an additional export crop. Small merchant settlements, market-centers, and the military fortifications of petty chiefs existed at strategic points on river banks. Some of these centers grew into bazaar towns in the nineteenth century. But the mass of the population traditionally lived, as today, in scattered village communities on garden land surrounding or surrounded by fields of wet rice, the main subsistence crop. Wet-rice cultivation depended on plough agriculture with teams of oxen or water buffalo. Goats and chickens were the other significant domestic animals.

The highlands rising into the Ghats were covered mainly by deciduous forests. The foothills, interspersed with occasional rice flats, were sparsely populated by people of the same cultural groups as those in the plains. They eked out their wet-rice cultivation with garden crops of fruits, spices, and vegetables, with shifting hoe cultivation of dry grains on hillsides, and with forest hunting of elephant, deer, and pig. Higher in the mountains lived primitive tribes of hunters and shifting cultivators, having only occasional contacts with the kingdoms of the plains.

Throughout most of the area Kerala's rainfall varies between 75 and 170 inches, being heaviest in the north where the mountains are

2:Gough E-4, 5 (1947-1949)1961 A Wll Kerala A Wll
Central Kerala Nayar*

in her care particular daily tasks in connection with cooking, housework, the pounding of paddy, and the tending of small children. The minimal unit of one woman and her own children, although having a special solidarity emotionally, was given very little recognition in the division of work. Women cooked communally in the kitchen, bathed and washed their own and any children's clothes in company in the bathing pool, and at the harvests moved in household groups to the fields to help the serf women of their families in cutting paddy. Nayar women's agricultural work, however, was subsidiary and they took no part in the more arduous tasks of transplanting and weeding.

The women of a Nayar retainer lineage also owed services to women of the landlord household to which their lineage was attached. Although their lower-caste rank prevented them from touching their mistress or entering her kitchen, they swept the house, accompanied its womenfolk to their bathing pool, and did various household chores. The landlord household normally chose three or four favorites from among the lineages attached to them to perform these services, but women of any retainer household might be summoned during the special preparations for a feast.

Authority and Responsibility Property groups, rather than lineages, were the main legal units within the local caste group. Their kāranavans formed the neighborhood assembly. Within the assembly, a kāranavan acted on behalf of his property group in managing the Nayar temple, settling small civil disputes in his own and lower castes, and adjudicating in cases of offense against Nayar religious law.

A kāranavan also represented his property group in its relations with its feudal lord and with higher authorities of the kingdom. We have seen that the property group and not the lineage held land on tenure from its landlord, and that although a lineage was attached to a landlord by hereditary right, the landlord conducted all economic transactions separately with the head of each property group within it. Similarly, each kāranavan was required to represent his own property group in ceremonial attendance on his village landlord, the chief of his district, or (if he were a direct vassal of the royal lineage) his king, at religious festivals associated with the temples of these dignitaries.

On behalf of his property group, a kāranavan was held legally responsible for his juniors in most types of legal offense. He paid their fines from taravād funds if they were found guilty of petty theft or debt before the village headman or the chief. If a member of the taravād was convicted in the royal court of treason, his kāranavan and

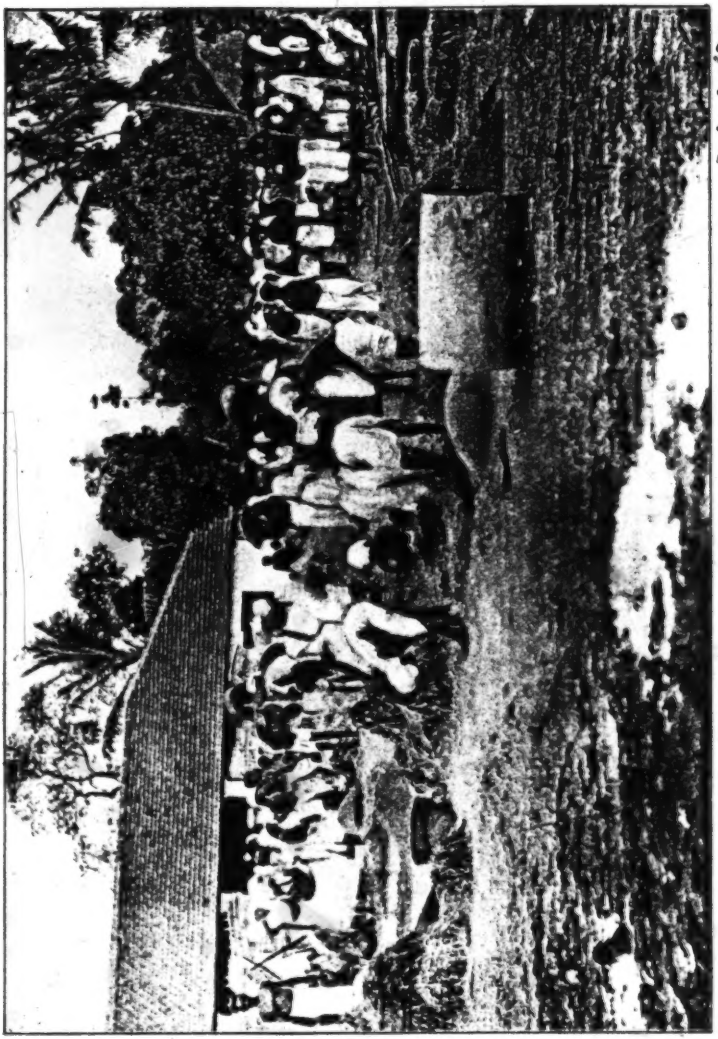
776 821 during that night for fear of calumny. There, the men do not care much. We will now bid adieu to Mr. Gopal [184] Pannikar, but not without thanking him for all he has told us about his own people.

241 Uchâl (Uchaval) is the term used for the first three days of the Malayalam month Makaram, usually falling between the 15th and 20th January. All over Malabar, [243] with the exception of Wynâd, above the ghâts, there are two crops of rice every year, one with the south-west, one [132] with the north-east monsoon. Elsewhere in Southern India rice land is always irrigated, but in Malabar there [776] is no such thing, practically, as irrigation, the heavy rainfall rendering it unnecessary, and the earth goddess—Bhûmi Dêvi—brings forth her fruit under the stimulus of the rain from heaven. She produces the crops as a female produces her children, and from the 1st of the month Makaram, she rests until the cultivator again begins to disturb her, three months later, when the showers preceding the south-west monsoon fall. Uchâl is the period of three days when the earth goddess menstruates. Granaries and all receptacles of grain are closed during Uchâl—they are not even visited. Paddy is not sold. No implement of cultivation is touched. The rice to be used during the three days is pounded out beforehand and kept separate. But it is no season of gloom; rather is it one of festivity. As particular forms of food 241 252 partaken on specific occasions have an interest of their 262 own, we must not omit description of the Uchâl cake—the Pâla Ata. (Pâla—spathe of the areca-palm, Ata—cake). A paste is made of rice flour and water and spread thickly (about an inch thick) on one side of two pieces of the spathe of the areca-palm, each piece being from 2 to 3 feet in length and about 8 inches wide. Powdered jaggery, scraped cocoanut, powdered ginger, a little garlic and other condiments, are then put in small quantities on the paste. The two pieces of the spathe are then placed together, and they are stitched all round the edges. The whole is covered over with soft red mud and put into a fire where it is kept until the mud covering cracks. The cake is then cooked and ready for eating. It is cut and distributed to members of the family and friends.

564 In parts of Malabar the Tîyan tenants present these 262 cakes to their Nâyar landlords as a token of allegiance or submission. Rice is the only article of food which if 466 prepared by a Tîyan the Nâyar cannot eat; so the Nâyar 241 has no caste scruples about eating the Pâla Ata prepared

9:Iyer E-4, 5 (ca. 1902-1906) 1912
AWll Kerala AWll
Nayar

243
576
291
342
137



NAYAR WOMEN THRESHING CORN.

[facing p. 98]

11: India G-4, 5 (1960-1961) 1962 AW11 Kerala AW11

intensity of cropping since the area covered by perennial crops, which is quite large in the case of Kerala, is irrelevant from the point of view of double or triple cropping. It will thus be seen that not only is the proportion of cultivable area to total area high in Kerala, but the degree of utilization of the cultivated area is also quite high.

FIELD CROPS

2.12 The techniques of cultivation as well as the economics of field crops differ widely from that of commercial plantation crops. The field crops are generally characteristic of the subsistence economy whereas the latter are largely market-oriented. Moreover, unlike field crops the plantation crops are perennial and do not require annual repetition of preliminary agricultural operations like ploughing, sowing, etc. The returns too vary widely. Field crops and plantations are, therefore, discussed separately in the pages that follow.

Cropping Pattern and Yields of Field Crops

2.13 Rice, the most important field crop, occupies a prominent place in the agricultural economy of Kerala. In 1958-59, it covered 1.9 million acres out of 2.7 million acres under field crops. The production of rice in the same year was 939,000 tons. While the rice acreage fell by only 0.4 per cent during 1951–59, its production during the same period leapt up by over 31 per cent. Increase in the yield rate during the same period was from 829 to 1,108 lbs. per acre (Table 11).[1] The growing appreciation among farmers of the utility of fertilizers, improved seeds and better techniques of cultivation is largely responsible for this steady improvement.

2.14 Next to rice, tapioca is the most important field crop of Kerala. During 1951–59, the area under the crop increased from 506,000 acres to 553,000 acres, that is by 11 per cent. The production of tapioca in 1958-59 was 1.5 million tons, that is, an increase of 4.6 per cent over 1950-51.

2.15 Tapioca and rice considered together, account for over 54 per cent of the net sown area which is the same as 90 per cent of the area under field crops. Among the remaining field crops, ginger, groundnut, sesamum, sugarcane and pulses are the most important ones. Ginger is primarily an export crop, and its fortunes fluctuate with the trend of foreign markets. During the recent years, the area under ginger has steadily declined from 30,000 acres in 1950-51 to 22,000 acres in 1958-59. Other field crops, however, have shown significant increases in area over the same period. The rate of increase is the highest for sugarcane, where it rose from mere 2,000 to 22,000 acres—an increase of 1,000 per cent in less than a decade. This is due to the commissioning of a sugar factory (900 tons crushing capacity per day) at Thiruvella in 1954. The output of sugarcane, however, rose by only 775 per cent. The next highest increase has been in pulses where the area rose by 287 per cent between 1951 and 1959. Pulses, with the exception of *tur* (*Cajanus indica*), are now increasingly raised as second or even third crop by availing of the moisture left in the soil after the harvest of paddy. This development owes

[1] [see p. 277, category 116 — Analyst]

[text continues on p. 28]

11: India G-4, 5 (1960-1961) 1962 AWII Kerala AWII

EXTENSION OF CULTIVABLE AREA

Cotton

2.25 Prior to 1956, Kerala was considered unsuitable for the cultivation of cotton. In that year an experiment was made on a pilot scale and the results were so encouraging that the area under Sea Island (long staple) cotton rose from 126 acres in 1956 to about 3,500 acres in 1959-60.

2.26 Sea Island cotton yields superior lint which can be spun into high count expensive yarn. The latter finds a good market within the country and at present has even got to be imported. The extension of area under this crop will help in saving valuable foreign exchange and it would also provide scope for development of such industries as ginning, baling, spinning and cotton seed oil extraction.

2.27 In view of the above factors it is desirable to undertake further extension of area under cotton. A part of this increase can take place at the expense of acreage under tapioca, which is a low yielding crop. About 0.2 to 0.3 million acres out of 0.56 million acres under tapioca can be diverted in this way during the next decade. Efforts should, however, be made to keep the output of tapioca at the existing level by raising its yield which is at a very low level.

2.28 There is also scope for diverting some highland area under single cropped paddy to Sea Island cotton since such a diversion would yield high returns in terms of value. The exact scope for such a diversion can, however, be ascertained only after the proposed land-use survey has been conducted.

2.29 Assuming 0.3 million acres are brought under Sea Island cotton, as suggested above, additional production of long staple cotton may be expected to reach a level of 192,000 bales by 1970-71.

Sugarcane

2.30 Sugarcane is a high value crop, and, therefore, is quite popular with the farmers. But it is one of those crops whose future extension of area is very much dependent upon the growth of sugar manufacturing industry. Its exact scope will, therefore, depend upon the growth of sugar factories.

2.31 The yield per acre of sugarcane in Kerala is very good (Kerala 40,000 lbs. per acre ; U.P. and Bihar 25,000 lbs. per acre ; all-India 28,000 lbs. per acre) and can be raised to 55,000 lbs. per acre. This factor favours the extension of sugarcane cultivation and the setting up of new sugar mills. At present there are about 25,000 acres under this crop in Thiruvella area, mostly concentrated around the Pampa river sugarcane factory. There is scope for a large increase in sugarcane acreage in the districts of Palghat, Trivandrum and Ernakulam which possess the requisite irrigation facilities. By 1971, the area under sugarcane may be doubled to about 50,000 acres.

Ginger

2.32 Ginger is a very high value yielding crop (Rs. 1,077 per acre). In view of good demand prospects for ginger in both internal and external markets, the production of

12:Peter E-5 (1939, 1949)1963 AWll Kerala AWll

as ginger and chillies, palm sugar, mangoes and bananas, betel leaf, tea and coffee. There are two main paddy (unhusked rice) harvests, the *kanni* in September and until November, depending on the type of rice planted and where, and the *magaram* in January and February.

A system of land-tenure and tenancy very special to Kerala is in existence in the state and its principal characteristics may be summed up as follows. Freehold land owners are called *janmis* and they are entitled to the absolute proprietorship of the land; they may mortgage or lease it to anyone as they wish. They are themselves nearly always non-cultivating. The first kind of tenure to which they may resort is called *kanam* and he who holds the lease is known as the *kanamdar*. This is a curious type of arrangement between landlord and tenant, by which the latter deposits a certain sum with the *janmi*, who in return pays interest on the amount as if it were a loan. The *kanamdar* then has the right to work the land or to lease it out to someone else. Every year he pays rent, an adjusted sum as the interest received from the landlord is deducted. Once every twelve years, a so-called renewal fee is paid by the tenant equal to three times the annual rent, and this gives him the right of possession for a further twelve years. Should he wish to give up the lease, the original deposit will be returned to him by the *janmi*. Most *kanamdars* sub-let and do not cultivate the land themselves.

The *kanamdars* often lease out the land as a *kanam* tenure too; but if they do not, it is as a *verumpattam* lease that they do so. This is a simple affair held for one year at a time, by which the tenant pays a fixed rent, or for several years, in which case it is called a customary *verumpattam*, and a renewal fee then becomes necessary, payable between five and twelve years. This lease is used only for paddy fields. Tenants of this category often sub-lease in the same way to others, who cultivate the land either themselves, or, more usually, employ labourers to do so. These labourers are of two kinds, free and tied. The former are coolies hiring themselves out for wages, while the others are agrarian farmhands who receive only board, lodging and clothing from the master responsible for them.

Customary *verumpattam* tenure of palm gardens for the production of coconuts or arecanuts is called *kuzhikanam*. The twelve year renewal fee is equal to the amount made on the garden in the last year and a half of the lease. Virgin and waste land, which nevertheless always has a *janmi* somewhere, is also let out on this type of tenure. The land owner has the right to evict the tenant if he has made no improvement of the land during his period of lease. House-sites occupied by tenants

12:Peter E-5 (1939, 1949) 1963 AWll Kerala AWll
Kammalans

the cross-roads of the main Shoranur-Palghat highway of the road to Lakkidi, a few furlongs down the latter, on the right hand side. In contrast to the Thandan houses to which we had been, although not to the Tiya (Thiyya) houses of the Cochin labourers, the place looked rather miserable. It was a thatched palm-leaf house, standing on a red laterite loam platform, in the middle of some paddy fields. There were signs about that these Tathans were not only goldsmiths but that they now also practised agriculture. There was paddy lying about to dry in heaps in the yard, and there were stalls for bullocks at the back.

We interviewed a man called Raman and his brother Kochen, aged fifty four and fifty two respectively, who lived polyandrously with their wife, Kurumba, forty five years old. They seemed rather impressed by us, and were reluctant to speak. They observed the outward forms of hospitality, however, and presented us with fresh coconuts for us to drink the milk.

Raman told us that the household's name was Padijarehil, meaning "Western", and that it was part of five others which constituted the Uzhugaparekil *tarawad*. The latter was *makkathayam*, as we expected, and exogamous, as was also their *kiriyam*, although, here too, they only observed the rule in matters which concerned those members of it whom they knew. They had two and a half acres of paddy fields, in simple *verumpattam* lease from a Nambudri Brahmin janmi called Kodiertha-mana. For this they paid five rupees a year and handed in a part of the harvest – five hundred *parahs*, I have in my notes, three hundred from the *kanni* crop and two hundred from the *magaram*.[1] As it was an ordinary *verumpattam*, there was no renewal fee. They had a deficit this year of forty *parahs* (roughly lbs. 866⅛) and they were wondering what they could do to make it good. Last year they had done "other work" (presumably such as hiring themselves out as labourers) in order to raise the cash needed to compensate for the deficiency in grain, and they might do the same thing now. When I asked them what kind of goldsmith's work they did, they laughed and said that they had given this up; how could they carry on with their traditional profession, they asked, when the sovereign which was once worth Rs. 25 had reached Rs. 77?

Raman and Kochen had had eleven children in their polyandrous

[1] This again seems too much. It is equivalent to lbs. 10,830 (1 Palghat *parah* = 10 *edengalis* = 40 *nalis* (1 *nali* = *tolas* 21¾ in s. Walluvanad and Palghat) = 866,40 *tolas*; as 40 *tolas* = 1 lb. in s. Malabar, 1 *parah* = 866,40 : 40 = 21¾ lbs and 500 = lbs 10,830).

12:Peter E-5 (1939, 1949)1963 AWII Kerala AWII
Kammalans

thayam was followed and caste, or rather sub-caste, endogamy. There was more polyandry in the second generation of this family than in any other encountered so far. I found that Kunji was married to two husbands; Lakshmi, aged thirty three, to four husbands; Paru, thirty, to two husbands; Sita, twenty eight, to three husbands; and Narayani, already mentioned, to two husbands. All the respective husbands were brothers, and only fraternal polyandry was practised. The women had all married early: Kunji and Yakshmi at sixteen, Paru at fifteen, Sita a bit later at twenty four, and Narayani, the youngest, at eighteen. The reason for which Sita had married later was that she had been taken by the three younger husbands of her elder sister Lakshmi, after seventeen years of marriage with the latter. Only Kanju, the eldest, had remained with Lakshmi, and Raman, Narayan and Krishna had decided to marry Sita jointly, when they found that she was not getting married and showed no inclination to do so outside. The two younger brothers of the Mudrikkelparampil household, Raman and Kunyuni, were eighteen and sixteen when they took Nani to wife; she was now twenty. Polyandry certainly did not look as if it were dying out in the blacksmith's caste, judging, at least, from this striking example.

The property upon which the family lived was worth four thousand rupees. It consisted of the house, some agricultural implements and a paddy field. The people were tenants of the Nambudri Brahmin *janmi* Kodierthamana, and paid him the rent of a customary *verumpattam* nine rupees yearly, plus a renewal fee of thrice the rent every twelve years. Poreyn and Kunyuni were practising smiths, hence the implements we had seen on coming in, and Raman worked at the Metal Industries Ltd. in Shoranur, where we camped. They also cultivated the paddy field to produce some of the rice they needed themselves, although the yield was not very great. The genealogy is given in Table 12.

On the 15th of November, 1949, together with interpreter and guide, I visited a family belonging to the third sub-caste of the Kammalans, that of the carpenters or *Asari* (often pronounced *Ashari*). I heard that laterite-cutters called *Puri-asari* or "mud carpenters" were assimilated to these people, but that they only constituted a division of the sub-caste. They are also reputed to be polyandrous; I did no have an opportunity, however, to verify this myself.

The *Asari* whom I saw that day, lived at Palappuram, a village on the main Shoranur-Palghat road, some few miles east of Ottappalam. The compound of the house was by the side of the road on the right, just beyond the village, coming from the west. It was a very poor looking

[Text continues on p. 199]

31: Slater S-5 (1916-1917) 1918 AWI India
Kerala AWII

Munsifs and District Judges with summary jurisdiction in the matter." The provisions in the regulation apply only to "Kanam tenants who, by themselves or through their predecessors in interest, have uninterruptedly held the holding for a period of not less than thirty years prior to the coming into force of this Regulation," and provide some restrictions on the part of the landlord in matters of renewal of kanam holdings, and ejection of kanam tenants; and dispense altogether with the right of *Melkanam*. The Puravaka janmis in Watakancheri number 54, of whom a few are Nambudri Brahmans, the others being of various castes. The Nambudris are the big landlords.

These janmis also are in some cases the custodians of "devaswoms" (literally "wealth of the gods"), lands belonging to the local temples; these are treated by them just like their janmam lands, but they keep separate accounts for the same. The Sirkar also manages devaswom lands and there is a department in the State which manages the affairs of the temples and the property belonging to them.

Of the total number of landowners (about 150), only 34 with an area of 194·44 acres cultivate their own lands. The rest sublet.

Of the non-cultivating landowners a few are big janmis like the Nambudri Brahmans and the Paliath Atchan. The Nambudri Brahmans pursue no occupation but that of living in strict conformity with the duties of a Brahman. They study the Vedas and live a pious and cleanly life. Western civilization and ideas have not penetrated to them. They maintain the joint-property system in which the whole property descends to the eldest male member. Only the eldest male is allowed to enter into legal marriage, but he can marry two or three women; the rest keep Nayar females as their mistresses.*

The "Paliath Atchan" possesses much land in the State. The head of the family lives in a place near Cranganore. He manages his estates through departments and officials like the Sirkar. He is the biggest landlord in the State, and a powerful hereditary chief.

The small landowners who do not cultivate their lands pursue occupations like retail trade, Government service, law, etc. These generally sublet their lands to tenants who own no lands and try to exact from these latter as much rent as possible. There are also agricultural workers who neither own nor rent land; the caste of "Cherumas" belongs to this class. Also a few of the low castes, the Mappilas and in some cases the Christians,—male and female—engage themselves in such work. They are low paid. Formerly these wages were in kind, but money wages have begun to prevail; but for harvesting work wages are invariably paid in kind, the worker receiving one para of paddy for every six gathered in.

The rents of paddy lands are paid in kind.

Agriculture.—Paddy is grown on all the wet lands. Out of the seasons, the cultivators also grow to a small extent such grains as gram and peas in the paddy lands. Area under paddy—653·24 acres.

* [This phrase must not be understood to mean that such Nayar women are maintained in any way by their Nambudri paramours. They depend on their own family property, which descends in the female line. The children of Nambudri Brahmans and Nayar women are reckoned Nayars, and are members of the joint family of the mother, and entitled to maintenance from that family property.—Ed.]

31: Slater S-5 (1916-1917) 1918 AWI India
Kerala AWII

243 Area yielding one crop—205·23 acres.
Area yielding two crops—448·01 acres.
There are a few acres yielding three crops, but only two crops are assessed.

There are different kinds of paddy, each having different periods of growth, and specially suited to particular soils. The fields are manured and in some cases slightly ploughed just before the rains in summer. The south-west monsoon usually begins in June and lasts for four months. As soon as the rain comes, lands are ploughed and paddy is sown in particularly favourable areas. Then all the fields of the farmer are well ploughed and manured; the seedlings are replanted over the whole area after a growth of twenty-eight days. Some kinds of paddy grow for sixty days, others eighty and ninety days. The system in which no replantation takes place is also in much vogue. The fields are protected from animal or bird pests; after a period of at most three months the paddy is mown by agricultural workers who separate the paddy from the stalks.

Another crop is also generally sown during the north-east monsoon season (October and November) which usually gives rain for about one month.

[407] The ploughs used are primitive and old-fashioned. The furrowing is done in this wise:—a flat piece of iron sharpened at one end is attached to a wooden frame with a handle; this handled frame is attached by means of a pole to a yoke which is placed on the neck of a pair of oxen or buffaloes; the worker then holds the handle and drives the oxen round and round the field until the whole field is well furrowed over. This is done *before* the heavy rain, when the ground is softened, but not under water. The sod is then crushed by means of sticks, this being generally done by females. The women walk in a row, beating the sod to and fro with heavy sticks held in one hand. After the field has been well watered by rains it is once more worked over by means of a log of wood (levelling board) drawn by oxen.

[412] The other agricultural implements used are the sickle, a big knife and spades.

231 *Stock.*—The following is the official census of the stock:—

Working oxen	245
Cows	289
Male buffaloes	361
Cow buffaloes	20
Young stock—	
Calves	169
Young buffaloes	7
Horses	2
Donkeys and mules	22
Sheep and goats	583

Oxen are used to drag carts, and for ploughing the fields. Most of the oxen here appear to be lean and weak; especially those used in ploughing. Cart-drawing oxen are better.

234 Cows are used for milking only, though the Muhammadans of the locality are not averse to eating beef now and then. The milk, buttermilk and ghee of the cow are in great demand especially among the Brahmans who cannot do without them; the lower

31: Slater S-5 (1916-1917) 1918 AWI India
Kerala AWII

243
291

HARVESTING PADDY IN NORTH MALABAR, FIELDS STILL WET

Photo by Agricultural College.

[facing p. 168]

31: Slater S-5 (1916-1917) 1918 AW1 India
Kerala AW11

241
463 toddy and jaggery and three carters who are mainly agricu
turists.

651 The revenue for the year 1915-16 was Rs. 3,175-10-3. Th
assessment for fasli 1312 for the Amsam of Kothachira wa
Rs. 6,519-2-4. By settlement (fasli 1326) it is Rs. 11,228-7-0.

241 *Agriculture.*—We have mentioned elsewhere the names of th
chief crops. Out of these, the two staple products are paddy an
arecanut, the former being a field cultivation and the latter garde
The mainstay of the bulk of the population is arecanut. Ever
household of any worth is surrounded by an areca palm garden.

The method of cultivation pursued in both these is of a
antiquated character.

245 1. *Arecanut.*--Mature fruits are selected for seeds. They ar
kept in pots and watered for one year. Next year they are plante
and within a year and a half or so, they grow into young plant
Then they are transplanted into the gardens where they have t
be grown. They are planted in parallel lines, the distance fro
one another varying from two to three yards. The plants are
first placed in pits measuring a cubic yard. Some cow dung an
ash manure are put, and a watering is given on alternate days i
the summer. During the monsoon they are left to themselve
When the plants grow up into trees, the pit is filled up and
shallow basin round it made just to contain a few gallons of wate
These are renewed every year in the beginning of summer, sma
channels are cut across the gardens to bring water to the root
every tree, water-lifts are erected and regular watering begu
This will continue until the advent of the monsoon.

• 243 2. *Paddy.*--On the first shower of the monsoon, fields are give
a hasty ploughing and seeds are thrown. A fortnight of averag
showers helps healthy sprouting and the ryot prays for simil
weather for another two fortnights to come. By this time, the
have grown up into healthy plants. Between the second and thi
month of their growth, they are carefully unrooted and planted
plots prepared by ploughing for the purpose. Between the fif
and sixth month after sowing comes the harvest. If there is
second crop, the land is again prepared for sowing immediate
after harvest and the whole process repeated. For this crop, th
ryot depends on the north-east monsoon which gives two montl
of heavy rain from the middle of November to the middle
January. After this harvest the fields lie fallow for a period
two or three months.

651 A table given in the next page will show the areas under sing
134 and double crop, different soils, and the nature of the assessmen
on each. (The information is taken from the village account
311 The assessment given herein is the revised one after the re-settl
ment.

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311 The assessment under IV. Unoccupied dry is the poten
651 amount, i.e., it would be levied if the whole area were cultivat
About one-third or one-half of it may have been at one time
another under cultivation, but the area cultivated in any single y
is very small.

[427] Rents are generally paid in kind, though of recent years th
is a tendency in some cases (e.g., when the tenant lives at a distan
to commute it for money at current market rates.

The village is assessed for land revenue at a permanent cha
of Rs. 3,759-3-0, to which must be added (to obtain the to
revenue demanded upon the village, for the year) the charges
the 'unoccupied dry land' actually under cultivation in the ye
This last will vary from year to year; the possible maximum
above Rs. 1,000. There is a local cess of 1¼ anna in the rupee
kist levied by the Taluk Board for roads, etc.

241 *Agriculture—Area under principal crops.*—The area under t
head varies from year to year according as more or less of
311 unoccupied dry land is taken into cultivation. For the year endi
March 1916, the following figures are given in the village accou
but they are less exact than they appear, being partly estima
by the village officials.

Paddy—First crop, 847·20 acres; second crop, 460·51 acres.		
Pulses and grains	122·47	acres.
Oil-seeds, gingelly	155·89	,,
,, castor	12·59	,,
Spices, etc.	87·23	,,
Fuel and timber trees	63·00	,,
Betel leaves	5·00	,,
Vegetables and garden products made up of—		
Vegetables	59·41	
Plantains and bananas	29·57	
Coconuts	17·00	
Mangoes	23·00	
Arecanuts	9·00	
Jack fruits	8·00	
	——	145·98

According to the 'A' Register the area of one crop wet land
271 acres. In some years it appears that this area is small
because part of this is *potential* double-crop land, two crops can
raised on it under favourable conditions. But it may safely
said that some 150 acres of wet land yield only one crop. Su
portion of the 'unoccupied dry' land which is cultivated in a
year also yields but one crop—even that with difficulty, after lyi
fallow for one, two or more years.

The minimum available area of two-crop land is 409·73 acr
In some years (according to the weather and seasonal conditio
this may increase to some 525 acres. If irrigation could be extend
more of the single crop area could be made to yield two crops.

● 243 Some fifteen to twenty-five acres may yield three crops, un
favourable conditions.

All the wet land is utilized for paddy cultivation. Paddy
sown in May soon after the first rains. By the end of Septem
or the beginning of October the first crop is harvested. The se

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lings for the second crop are then planted and will be ready for harvest in December or January. In double-crop wet lands both crops are as a rule paddy. But a small area may be used for growing garden vegetables, and this is invariably the case in the three crop lands. Only one crop is raised in the dry lands actually tilled and this crop is determined by a rotation of crops, consisting of paddy, other grains and pulses, gingelly, etc. There is great variety in rotation. Usually the field lies fallow once in three years, often for two or three years continuously, according to the fertility of the soil. The importance of rain in due season for paddy cultivation cannot be over-estimated, the whole prospects of the village for the year may be altogether changed by even a slight failure of the monsoon at the critical stages in cultivation. In that case the local prices of paddy go up very suddenly, as now (August 1917).

Only one type of plough is seen—the usual old fashioned country plough, which merely scratches the ground. It lasts only for a year or two and costs only from ten to twelve annas.

Other implements are the levelling board, harrow (a long wooden hammer used by the hand), spade, kuzhi kutti (i.e., burrowing tool), jack-knife, etc. The levelling board costs about Rs. 2½ and lasts from 6 to 8 years; the spade costs Re. 1 and is worn out in a year. It has a blade set at right angles to the handle and is swung like a pick-axe.

Stock.—

	1914.	1910.
(*a*) Working oxen	296	250
(*b*) Cows	350	382
(*c*) Male buffaloes	256	286
(*d*) Cow buffaloes	6	10
(*e*) Young stock of above species ...	266	221
(*f*) Riding horses	2	...
(*g*) Donkeys and mules...	...	..
(*h*) Sheep	...	...
(*i*) Goats	201	285
(*j*) Pigs	...	...

The 1914 figures are approximately true in 1916.

Working oxen and buffaloes are better fed than others. They are given enough straw or grass, and hot conjee (gruel) mixed with oil-cake, bran, atc. Occasionally working oxen are given flesh (fowls). Cows and cow-buffaloes are given straw and conjee and bran water. They are led out to graze on the hill sides and pastures during the day. Their young follow them. The goats are allowed to stray and feed themselves as best they can. Their milk is used for medicinal purposes and is considered very nutritious.

There is no good pasture in the village, and the cattle are lean and bony. After harvest cattle stray over the stubbles, finding what food they can. The fields are often quite small, say 100 by 75 feet, and frequently there are considerable differences of level between adjoining fields, which is a difficulty in the way of proper irrigation.

Manuring.—About seventy-five per cent of the cattle dung is used as manure. The rest is dried in the form of thick cakes